



PARTICIPATION AND LEADERSHIP ON IRRIGATION WATER GOVERNANCE IN STA. CRUZ RIVER WATERSHED, LAGUNA, PHILIPPINES

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ABSTRACT - Irrigation is the key to social and economic development. Reforms in water governance are slowly taking place due to the lack of administrative capacity and interests for actors to change. This descriptive research on water governance focused on the assessment of the leadership and the type of leadership style and the participation of the members. Methods used include household interview, key informant interview, focus group discussion, review of documents, and observation. Stratified sampling was utilized wherein the respondents were randomly selected. Data were described using descriptive statistics such as frequency distribution and percentages. Results revealed that members of the irrigators' association have the liberty to express and that leader and members decide on what is best. They are partners in the various phases of activities. Officers consult the members. And the members participate in various activities. Both IA members and officers are involved in the planning and implementation phases. In the governance of irrigation water, officers practice a democratic leadership style. This is evident in the following: consultation among members in making decisions, delegation of power, openness, and encouragement for participation. Good leadership among the Irrigator's Association encouraged the members to actively participate in the planning and implementation of the irrigation system. The democratic leadership style of the irrigators' association has been proven effective in the management of the irrigation system in order to have good water governance. The participation of the members (81.82%) is associated to their high level of awareness that the operation and maintenance of the irrigation system is their responsibility to have equitable water distribution.

Key Words: Participation, leadership, water governance

INTRODUCTION

Irrigation is always presented as the cornerstone of social and economic development in agrarian South East Asia (Chea et al., 2011). However, there are many problems associated with irrigation. There is significant inequity in the distribution of water across irrigation systems (Hussain et al., 2004). Irrigation will also be affected by water scarcity attributed to the massive degradation of the Philippines' watersheds and river basins, integral to the replenishment and maintenance of ground and surface water (SEPO, 2011). Water governance is seen as an effective way to address the problems to achieve agricultural development.

Water governance was defined by the Global Water Partnership as the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society. This includes the ability to design public policies and institutional frameworks that are socially accepted and mobilize social resources in support of them (Rogers and Hall, 2003).

Water is a natural resource known for community participation in managing the water supply (UNDP-WGF, 2007). In the Philippines, the National Irrigation Association (NIA) started its Participatory Irrigation Management in early 1980s having 2,400 registered Irrigators' Association (IA). Eighty

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percent entered into contracts with NIA to be responsible in operation and maintenance. The contracts allow negotiations for sharing of fees ranging from 25 to 75 percent. NIA moved to Irrigation Management Transfer (IMT) which aims to include the establishment of organized and functional IAs, improve performance of the NIS thru equitable water distribution, timely and reliable delivery of water, higher irrigated cropping intensity, and efficiency in the collection of service fee (Stoutjesdijk, 2012).

Provisions of the IMT imply that the success of irrigation water governance lies on the leadership of the IA officers and participation among the members of the IA. Community participation is evident particularly in the environmental aspects such as watershed, river system, water and others.

Participation is embedded in man. It is an obligation coupled with social responsibility (Masoudnia et al., 2012). Participation in Integrated Water Management is a process taking different forms depending on the objectives and roles of stakeholders. It involves successive stages where it gives opportunity to be consulted. Participation is a means to cultivate water governance (Rault, 2009). As a strategic process, it serves as an avenue to structure problems and problem solving process.

To encourage participation in governing water, leadership is essential. The leadership capabilities serves as a pressing issue in terms of the required reforms in the governance of the water sector that is taking place very slowly attributed to the lack of administrative capacity and lack of incentives or interests for actors to change (Tortajada, 2010).

Leadership varies among the persons and situations (Timothy et al., 2011). Leadership style is based on beliefs, ideas, norms, and values (Iqbal et al., 2012). The foundations of leadership include power and personal traits. Each organization has its own structure and leadership style to meet the

objective (Chen, 2006). In the case of school setting, the staff and teachers are satisfied in their work with democratic principals who share information, delegate authority, and maintain open communication (Imper et al., 1990; Rice & Schneider, 1994). The same holds true in irrigation which also has its structure and leadership in order to achieve good water governance.

With the current complexity of water governance in the country particularly in agriculture, it needs immediate attention through research and development to ensure the country's food security (Tortajada, 2010). Hence, this undertaking assessed the IA leaders and the participation of members in irrigation water governance.

METHODOLOGY

The study was conducted in Sta. Cruz River Watershed particularly in the municipalities of Sta. Cruz and Pila. Pila is politically subdivided into 17 barangays. Eleven of these barangays are the places of residence of the farmer-respondents in this study (Municipal Profile, undated). Sta. Cruz is a first class municipality and the provincial capital of Laguna located on the banks of the Sta. Cruz River which flows into the eastern part of Laguna de Bay. Among the 26 barangays in Sta. Cruz, the study covered 11 barangays where the respondents live (Municipal Profile, 2010).

Sampling Design

There are 26 Irrigators' Association in Sta. Cruz and Pila wherein 19 are from Sta. Cruz and seven are from Pila. Both sites have upstream, midstream, and downstream communities. There was a representative sample population from the two municipalities. After determining the sample size from each municipality, stratified sampling was done among all the IAs.

The respondents of the study were all irrigated rice farmers who were members of

democratic leader informs that decision back to the group for unity purposes (Woods, 2008).

A democratic leader also delegates authority to others, encourages participation, relies on subordinates' knowledge to complete the tasks, and depends on respect for influence among his subordinates (Daft, 2008). Daft's description of a democratic leader corroborated to the answers of the majority of the respondents about their IA officers.

The result of this study showed that democratic leadership as practiced by the IA leaders seemed to be the appropriate leadership style in order to have good irrigation water governance. It was evident in the focus group discussion wherein IA members regarded the management of irrigation water as good, there was equitable and efficient allocation of water, irrigation water was well managed, and well distributed by the IA officers.

The case of the IA leaders in the study sites having democratic leadership style was related to the situational leadership theory. The theory indicates that high performance can be achieved by influencing strategies such as task behavior, where leaders organize work activities, develop action plans, clarify role expectations and standards, and monitor operations and performance. For a strategy like relationship behavior, the leaders listen to the concerns of the followers, provide support and encouragement, consult the people regarding decisions that affect them, help people settle conflicts, and recognize the contributions and accomplishments of their followers (Thompson, 2009).

The situational theory describes the democratic leadership style of the IA leaders. Democratic leadership style is appropriate among IA attributed to the attainment of high performance as indicated in the theory. By being democratic, the leaders will be able to manage well the IA that will lead to good water governance.

It is good to note that majority

(76.70%) of the respondents answered that the leaders and members were partners in the various phases of activities from planning to implementation and monitoring and evaluation; while 22.16 % felt that they were partners in the management of the irrigation system (Table 1). However, based on the result of the FGD, the members who felt that they were not considered partners in managing the irrigation system were those with inactive status.

The leaders and members were the main actors in water governance. In the case of Kibera, Kenya it was found out that the actors' efforts on water governance centers on the extraction, distribution, and use of water to serve the purpose of the concerned organizations in order to maximize the opportunities provided by the local institutions (Birongo and Le, 2005). In the Sta. Cruz IA, the actions of the leaders and members start with planning and end with monitoring and evaluation primarily to achieve good water governance. With the consequential actions of both the leaders and members including the democratic leadership style of the officers, good management of the irrigation system was achieved in the study sites resulting in the availability of rice for household consumption. As Guillermo said, "*Basta walang kalamidad, sapat naman ang bigas namin*". (As long as there is no calamity, our rice is sufficient).

In this study, the following themes on the functions of IA leaders were revealed:

Organize Activities

The IA leaders were the ones who organize activities of their association particularly in maintaining cleanliness of the irrigation canal by cutting the grasses surrounding it and removing the debris to avoid blockage of water flow.

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Table 1. Assessment of the of the irrigators' association leadership.

PARTICULARS	STA. CRUZ (n=99)		PILA (n=77)		TOTAL (n=176)	
	F	%	F	%	F	%
Evaluation Level						
Very Good	20	20.20	9	11.69	29	16.48
Good	52	52.53	52	67.53	104	59.09
Fair	18	18.18	12	15.58	30	17.05
Poor	7	7.07	3	3.90	10	5.68
Very Poor	2	2.02	1	1.30	3	1.70
Total	99	100.00	77	100.00	176	100.00

Types of Leadership

Members have the liberty to express their opinion and suggestions and the leader and members decide on what is best depending on the majority rule

Yes	92	92.93	72	93.51	164	93.18
No	7	7.07	4	5.19	11	6.25
No response	0	0.00	1	1.30	1	0.57
Total	99	100.00	77	100.00	176	100.00

The leader is the only one who expresses his/her opinion and in command in giving instructions on what will the members do while the members are mere listeners and followers

Yes	18	18.18	10	12.99	28	15.91
No	80	80.81	65	84.42	145	82.39
No response	1	1.01	2	2.60	3	1.70
Total	99	100.00	77	100.00	176	100.00

Leader and members are partners in planning, implementation and monitoring and evaluation of activities.

Yes	78	78.79	57	74.03	135	76.70
No	20	20.20	19	24.68	39	22.16
No response	1	1.01	1	1.30	2	1.14
Total	99	100.00	77	100.00	176	100.00

Listen to Members

The IA leaders listen to the members during meetings and whenever there are issues or complaints on the use of irrigation water. Leni (not her real name) expressed during the FGD, "*Meron kaming buwanan na pagmi-meeting. Nagkakaroon din ng dialogue, nagtatalakayan po kami*". (We have monthly meetings. We likewise have dialogue wherein we discuss matters).

Resolve Conflict

When conflict arises particularly when a few farmers did not follow the schedule of irrigation water use and when some divert water to irrigate their farms, the IA leaders resolve the conflict. Eddie (not his real name) cited that, "*Hindi po maiiwasan ang hindi pagka-kaunawaan. Ang hakbang kong ginagawa ay pag-usapan para malutas yung mga problemang hidwaan para naman hindi na ito maulit*". (We cannot avoid misunderstandings. What I do is discuss the matter to solve the problem so that it will not happen again).

Prepare Cropping Calendar

In developing the action plan, the IA leaders were the ones preoccupied specifically in coordinating with the water master in preparing the cropping calendar for water distribution. As Leni said during the FGD, "*Ang tubig ay base sa taniman. Pag nagtanim, kailangan na mauna ang nasa taas kasi malapit sila sa source. Susunod yung nasa gitna, pag di na kailangan nung mga nasa taas at gitna, kami namang nasa laylayan*". (Water distribution is based on the schedule of planting. Those in the upstream, because they are near the source, are the ones who will plant first followed by those in the midstream. Farms

located in the downstream will use the water when those in the upstream and midstream no longer need it. That is why planting is late among those belonging in the downstream).

Coordinate with NIA

The IA leaders likewise coordinated with NIA when there are canals that need immediate repair. Erning (not his real name) shared during the FGD that, “*Nire-report po namin kay Engineer pag may sirang kanal. Nabisita po sya dito para tingnan.*” (We report to Engineer whenever there is damage on the irrigation canal. He visits our area to check).

Monitor Water Distribution

One of the most vital functions of the IA leaders was the monitoring of the water distribution to irrigate the farms. This is regularly done together with the ditch tender, hence, it is difficult to be an IA officer. As Sonny (not his real name) said, “*Ang pamunuan namin ang sumususog sa tubig at nakikipag-usap sa mga nakaka-alam sa nagpapa-agos ng tubig, dun sa water master*”. (The officers are the ones who check the flow of water. They are also the ones who talk to the water master, the one in-charge of water distribution).

Conflict Resolution

Table 2 presents the occurrence of conflict between the IA leaders and members. Findings revealed that majority (76.14%) of the respondents have no conflict with their officers while 23.30 % answered yes. However, it was mentioned during the FGD that conflict sometimes occur among members. As Nico (not his real name) said, “*Pag nagkaroon ng hindi pagkakaunawaan, kinakausap ko yung magkabilang panig at sinasabihan ko sila na palampasin na lang. Tayo naman hindi magkaiba, tayo ay dito na tatanda sa pagtutubigan. Hindi naman pwedeng tuwing lumalabas araw-araw ay mag-iwasan*” (If a misunderstanding arises, I talk to both parties advising them to forgo what

happened. We are not different from one another and will grow old here in farming. One cannot go out every day and avoid one another).

Table 2. Occurrence of conflict and resolution.

PARTICULARS	STA. CRUZ (n=99)		PILA (n=77)		TOTAL (n=176)	
	F	%	F	%	F	%
Occurrence of Conflict Between Officers and Members						
Yes	33	33.33	8	10.39	41	23.30
No	65	65.66	69	89.61	134	76.14
No response	1	1.01	0	0.00	1	0.57
Total	99	100.00	77	100.00	176	100.00
Nature of Conflict*						
Water supply to irrigate the farms	9		3		12	
Misunderstanding	9		2		11	
Diverting irrigation water to their farms	7		2		9	
Unequal distribution of water	5		0		5	
Financial mismanagement	3		1		4	
Poor leadership	2		1		3	
Decision making	1		0		1	
Destruction of the water control box	1		0		1	
Lack of trust and confidence to leaders	0		1		1	
Conflict Resolution*						
Dialogue/meeting	16		6		22	
No response	8		0		8	
With NIA as mediator	3		2		5	
Through the president/chair	4		0		4	
Not clear/not resolved	3		0		3	
Changing of the management	1		0		1	
Venue of Resolution*						
Meeting place	16		2		18	
No response	7		2		9	
House of the president	4		1		5	
Barangay hall	3		1		4	
NIA office	3		1		4	
Farm area	0		1		1	

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***- multiple response**

According to those who answered that conflicts occur, the nature of conflict pertained to water supply to irrigate their farms (29.27%) and misunderstanding (26.83%). Based on the result of the study conducted by Bedeke (2011), conflict is highly inevitable in irrigated areas. Conflict arising from water distribution was rampant. On the other hand, according to Morgan (1986 as cited by Hall & Tolbert, 2005), there is always conflict in any organization. The conflict could be personal, interpersonal, or between groups and coalitions. It may be based on organizational structures, roles, attitudes, and stereotypes or the conflicts occur due to scarcity of resources. In the case of the IA in the study sites, conflict usually occurs due to water supply to irrigate the farms.

Among the respondents who had conflict, majority (53.66%) cited that conflicts were resolved through a dialogue or meeting. With regard to the place for resolving the conflict, 43.90 % cited that they set a meeting place to discuss the matter.

The case study conducted in Daraylf and Venecia in Condega District illustrates the importance of calling third parties in cases where issues relating to the allocation and use of water cannot be settled directly by the competing parties. Although it does not guarantee settlement, the involvement of third parties offers an opportunity to ensure that the allocation of water and the conditions for its use meet the needs not only of the powerful local water users in the upstream but also of the less powerful water users in the downstream (Gomez and Ravnborg, 2011).

Findings revealed that the good leadership of the IA officers based from the assessment of the members resulted in the non-occurrence of conflict between them. This implied that the management of the irrigation system under the leadership of the officers leads to good water governance. This led to cooperation among the members which was evident in the attendance of meetings and the

time and labor in managing the irrigation system.

Participation in Water Governance

Consultation with the members was one of the activities being done by the IA officials. Consultation refers to the involvement of people's views on the proposed actions through dialogue. It provides opportunities for members to express their views. It includes education, information sharing, and negotiation. This process allows people to be heard and have a voice (Burns and Taylor, 2005).

Majority (86.93%) of the member-respondents were being consulted by IA officers. Consultations were conducted during planning, implementation, monitoring and evaluation phase. During the planning phase, activities include problem analysis, decision-making, and creation of rules and regulations. The creation of rules and regulations obtained the most number of responses as cited by majority of the respondents (117) while decision-making ranked second (101), and 98 cited that they are consulted during problem analysis.

With regard to the implementation phase, there was only a slight difference on the number of respondents who mentioned participation during conduct of meetings and activities. Among the three (3) phases, monitoring and evaluation phase obtained the least number of responses. Consultation on monitoring and evaluation activities was cited by 43.79 % of the respondents and others (39.22%) indicated identification of monitoring and evaluation of team members. Based from informal interview with some of the respondents, the members of the IA were not involved in the monitoring and evaluation phase. Accordingly, this activity was usually being done by the NIA officials and IA officers only.

The phases of consultation form part of community development. In community development activities, people's participation is

perceived as a process by which individuals are involved in initiating, deciding, planning, implementing and managing the group and its activities. It is also a social development process in which people find ways to attain their expectations, collective needs, and overcome their common problems. The collective action is through self-help and mutual-help spirit. The spirit of working helps to hasten the achievement of shared interests through group-based activities. Understanding collective action where members participate leads to an understanding of the dynamic aspect of the group process where participation takes place. Participation is a dynamic process, thus, it is difficult to predict or quantify using a standard measurement. Participation is rather molded by and emerged from individuals' experiences in participating (Samah and Aref, 2011).

According to the principles of water management, water development and management should be based on a participatory approach, involving users, planners and policymakers. This draws on the principle of a democratization of decision-making and gives recognition to the input of the stakeholders.

Participation only takes place when stakeholders are involved in the decision-making process. This occurs when local communities come together to make choices on water supply, water management and water use. Local communities should also have access to information and participate in consultation processes and other activities of the organization (Cap-Net, GWP & EUWI-FWG, 2008).

Participation is beneficial to the organization. It emphasizes to the involvement of every member in decision making through consultation and provision of inputs from users during the planning stage and implementation of water projects. This leads to success in terms of scale design and operation and maintenance. Participation is also a means to protect environmental resources and respect cultural values and human rights. Moreover, participation is an avenue to coordinate

interests, increase transparency and accountability in making decisions (Cap-Net, GWP and EUWI-FWG, 2008).

CBIWM focused on the management of irrigation water collectively to improve human well-being and reduce poverty. The devolvement of authority of irrigation water management to the local community empowered the communities to manage their own resources. To ensure that the local communities were capable of managing their own resources, CBIWM required strong investments in capacity development and development of local institutions and governance structures (Fabricius, 2004; Magome & Fabricius, 2004 as cited by Bedeke, 2011).

The study of Bedeke (2011) implies that community-based participatory management of irrigation system is possible without the communities being dependent to other institutions since this has been practiced for a long time in many countries.

This study found that the IA members actively participated in the planning and implementation of the irrigation system. Through this, problems were addressed immediately particularly on the distribution of water and maintenance of irrigation canals.

Participation of IA

Table 4 presents the responses of the respondents regarding their participation to IA activities. Data obtained revealed that majority (81.82%) of the respondents participate in various activities of their IA. Activities participated by the members include meetings (69.93%), cleaning the irrigation canal (30.07%), and repairing of irrigation canal (16.08%).

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Table 3. Consultation phases of IA officials.

PARTICULARS	STA. CRUZ (n=99)		PILA (n=77)		TOTAL (n=176)	
	F	%	F	%	F	%
Officers Consult Members						
Yes	88	88.89	65	84.42	153	86.93
No	11	11.11	10	12.99	21	11.93
No response	0	0.00	2	2.60	2	1.14
Total	99	100.00	77	100.00	176	100.00
Phases of Consultation*						
Planning Phase						
Rules and regulations	71		46		117	
Decision making	59		42		101	
Problem analysis	57		41		98	
Implementation Phase						
Conduct of meeting	87		62		149	
Conduct of activities	84		64		148	
Organizational structure	46		38		84	
Monitoring and Evaluation (M&E) Phase						
M & E activities	36		31		67	
Identification of M & E team members	32		28		60	

***Multiple responses**

For the respondents' level of participation to their association, results varied. Majority (64.34%) of the respondents perceived that their participation was moderate only and 23.08% answered that they were highly involved.

In this study, community participation pertains to peoples' involvement in activities within the community. It plays a vital and long-standing role to promote quality of life. Community participation also serves as a primary factor that can affect the processes of community development. Community development cannot be achieved without community participation and empowerment

(Samah and Aref, 2011).

For Burns et al. (2004), community participation involves individuals in making decisions to matters that affect their lives. Community participation implies that communities should play an active role and have a degree of power and influence. Community participation is also imperative to improve democratic and service accountability. It enhances social cohesion and effectiveness as communities bring understanding, knowledge and experiences necessary to the regeneration process. It also enables local communities to come up with relevant policies. The community participation also adds economic value by mobilizing voluntary contributions to deliver regeneration and skills development which magnify the opportunities for employment thereby increasing the wealth of the community. It also serves as an avenue for the community to develop the skills and networks needed to address social exclusion. Lastly, it promotes sustainability attributed to the sense of ownership of their communities.

Participation is very essential in water governance. The WWAP identified participation as one of the features of good water governance. For Rogers and Hall (2003), participation refers to all citizens expressing their interests throughout policy and decision-making processes. Participation involves voicing out directly their concerns. This is a contributory factor in achieving water governance.

Group cohesiveness is also related to community participation. It refers to the force to bring group members closer together because of emotions or their tasks. The emotional aspect of cohesiveness is derived from the connection that members feel to their group members and to their group as a whole. On the other hand, task-cohesiveness refers to the degree wherein the group members share group goals and work together in order to achieve their goals (Thompson, 2009).

The effectiveness of participation among the IAs in terms of good water

governance was evident in the study. The irrigation canals were well maintained by the IA which resulted in non-blockage of water flow to irrigate the rice farms.

Almost all the respondents felt empowered considering that they were in control of their rice land, own the houses where they live, have access to roads, irrigation water, and credit facilities that are provided by rice traders, CARD-MRI, and TSPI. They also feel a sense of empowerment by being members of the IA, establishing networks with NIA, the Department of Agriculture, and PhilRice, and developing knowledge and skills based from their experiences and from the trainings/seminars provided by their networks from various government agencies.

Majority (87.50%) of the respondents provided inputs on water governance for irrigation in return for the benefits they received from their IA. The nature of input of the member-respondents pertained to labor and time (86.90%) used in cleaning irrigation canal, repair of irrigation canal, and cutting the weeds surrounding the canal. The inputs provided by the IA contributed to the achievement of good water governance since it focused on the maintenance of irrigation canals where water flows from the source to irrigate the rice farms.

Table 4. Participation of members of IA on water governance.

PARTICULAR S	STA. CRUZ (n=99)		PILA (n=77)		TOTAL (n=176)	
	F	%	F	%	F	%
Participation in IA Activities						
Yes	84	84.85	60	77.92	144	81.82
No	15	15.15	17	22.08	32	18.18
Total	99	100.00	77	100.00	176	100.00
IA Activities*						
Attending meetings	58		41		100	

Cleaning of canals	24	19	43
Repair of irrigation canal	16	7	23
Cutting the weeds	5	10	15
Attending seminars	7	7	14
Socialization activities	4	0	4
No response	2	1	3

Level of Participation						
Moderate	46	54.76	46	77.97	92	64.34
High	27	32.14	6	10.17	33	23.08
Low	7	8.33	4	6.78	11	7.69
Very High	4	4.76	2	3.39	6	4.20
Very Low	0	0.00	1	1.69	1	0.70
Total	84	100.00	59	100.00	143	100.00

**multiple response*

CONCLUSIONS AND RECOMMENDATIONS

It is significant to note that the respondents regard their respective leaders as good considering that they feel empowered for having the liberty to express their opinions and suggestions, together they decide on what is best, and power is delegated among members. The respondents perceived that the leaders and members were partners in the various phases of activities from planning to implementation and monitoring and evaluation. In its entirety, the level of participation of the respondents was only moderate but considered active with regard to activities pertaining to the irrigation canal.

Good leadership among the IA encouraged the members to actively participate in the planning and implementation of the irrigation system. The democratic leadership style of the irrigators' association was proven effective in managing the irrigation system towards good water governance. Members' participation was associated to their high level of awareness that the operation and maintenance of the irrigation system is their responsibility to have equitable water

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distribution.

It is recommended that leadership trainings be continuously provided by NIA to the IA leaders considering that leadership changes when the term ends and new officers are elected. Appropriate trainings will help develop their leadership skills and strengthen their capabilities. The IA leaders should maintain democratic leadership style to sustain good water governance. For the IA members, seminars/trainings on organizational development should be provided by NIA for the members to value membership and to raise their participation from moderate to high level in all IA activities.

A multi-sectoral research on irrigation water governance is highly recommended to help ensure rice sufficiency at the national level. Other variables such as empowerment and social capital are thereby recommended for inclusion for a more in-depth study to contribute to the existing body of knowledge.

STATEMENT OF AUTHORSHIP

The first author was responsible in conceptualizing the study, data gathering, and analysis. Most importantly, she prepared the draft and finalized the writing of this article for publication. The second author provided valuable suggestions and reviewed the paper.

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